

Seagrass

According to Short and Coles, seagrass are defined as marine flowering plants that have adapted to the nearshore environment on most of the world's continents (2001). They go on by mentioning that most seagrass species are completely marine, although some species cannot reproduce unless emergent at low tide or subject to freshwater inflow (Short & Coles, 2001). Furthermore, seagrass as a family can withstand a large variety of differing environmental factors, ranging from hypersaline and relatively high temperatures to brackish or almost completely fresh water and relatively low temperatures (Short & Coles, 2001). According to Dolch et al., the main limiters for seagrass growth in the North Sea and Wadden Sea are the sediment type, oxygenation, temperature, and salinity (2017). Only two species of seagrass were identified by this study in both the North Sea and the Wadden Sea. These species are Dwarf eelgrass (*Zostera noltii*) and Eelgrass (*Zostera marina*), with the latter growing to much larger size, but being less tolerant to low tide exposure (Dolch et al., 2017). No invasive species of seagrass are known in the North Sea and Wadden Sea.



History/ Population trends

According to Dolch et al., as far as known, intertidal seagrass beds in the Dutch Wadden Sea were never as widespread as in the northern parts of the Wadden Sea (2017). However, an inventory in 1972, as well as a mapping in 1931 and 1972, show that intertidal seagrass was far more abundant than at present day (Dolch et al., 2017). In 2000 the estimate of seagrass present in the Dutch part of the Wadden Sea was 224.7ha of the area covered in seagrass, whereas this was an estimate of 292.4ha in 2014 (Dolch et al., 2017). During 2008-2015, the total area of *Zostera* in the Danish Wadden Sea ranged from a maximum of 1,140 ha in 2010 to a minimum of 670 ha in 2014 (Dolch et al., 2017). A tendency of increase from 2008 to 2010 was followed by a steady decrease from 2010 to 2014 and rather stable conditions in 2014 / 2015 with a bed area of 692 ha in 2015 (Dolch et al., 2017).

Miscellaneous

- With more than 200 km², the Wadden Sea comprises the largest intertidal seagrass area in Europe (Dolch et al., 2017). However, the coverage of seagrass beds differs widely between the regions and it remains a riddle why 80 % of the seagrass occurs in the northern Wadden Sea (Dolch et al., 2017).
- Seagrass serve both the role of ecosystem engineer as well as provider of food as a primary producer (Short & Coles, 2001; Dolch et al., 2017). Additionally, seagrass beds are a highly sought-after habitat for many species that use them as nursery grounds (Short & Coles, 2001; Dolch et al., 2017). Many of these species are commercially usable for humans.

Sources

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